

CLAIMS:

1. A modular swimming pool water heating system comprising a first casing for mounting in an attic of a building;
 - a heat exchange unit removably mounted in said first casing;
 - an opening in said first casing permitting access to the interior of the first casing for receiving said heat exchanger;
 - a cover removably mounted on said casing for closing said opening;
 - an inlet manifold on said heat exchanger for introducing swimming pool water into said heat exchanger, said inlet manifold extending through said cover on said first casing when the first casing is closed ;
 - an outlet manifold on said heat exchanger for returning water to a swimming pool, said outlet manifold extending through said cover on said first casing when the first casing is closed;
 - inlet sleeves for removable attachment to one side of said first casing for introducing air into the casing;
 - fan units for removable mounting on a second side of said first casing opposite said one side for drawing air into said first casing and through said heat exchange unit; and
 - elongated ducts for connection to said inlet sleeves for receiving warm attic air from locations remote from said first casing and feeding said air to said first casing for passage through said heat exchange unit to heat any pool water circulating therethrough.
2. The system of claim 1, including:
 - a first sensor for monitoring the temperature of air in an attic;
 - a second sensor for monitoring the temperature of water flowing from a swimming pool through said heat exchanger; and

a controller connected to both said sensors and said fan units for actuating the fan units only when the difference between the temperatures monitored by said first and second sensors reaches a predetermined level.

3. The system of claim 2, wherein said predetermined level is approximately 20°F.